

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION**

THE PACID GROUP, LLC,

Plaintiff,

v.

Case No. 6:09-CV-143 (LED) (JDL)

APPLE, INC. et al,

Defendants.

**DEFENDANTS' REPLY IN SUPPORT OF THEIR MOTION FOR SUMMARY
JUDGMENT OF INDEFINITENESS FOR '646 PATENT CLAIMS 12 AND 26**

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PACid's proposed construction of the "interrupt control means . . . for issuing . . ." limitation—"hardware or software that issues a signal to interrupt the operation of the processor"—is unbounded functional language that completely lacks structure. "Hardware or software" necessarily covers every possible way to perform the recited function. PACid's proposed construction thus demonstrates PACid's true purpose of obtaining a purely functional claim limitation—an unbounded outcome that the Supreme Court and Congress have rejected. Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 28 (1997) (noting that section 112(6) "was enacted as a targeted cure to" patentees' use of all-encompassing functional claiming); Halliburton Oil Well Cementing Co. v. Walker, 329 U.S. 1, 12-13 (1946) (rejecting functional claim language to prevent patents that would "bar the use of all devices now or hereafter known" that performed the claimed function), superseded by 35 U.S.C. § 112, ¶ 6; see also Mas-Hamilton Group v. LaGard, Inc., 156 F.3d 1206, 1214 (Fed. Cir. 1998) (construing claim pursuant to section 112(6) because otherwise it would "be construed so broadly to cover every conceivable way or means to perform the function of moving a lever").

This Court should reject PACid's invitation to create, through claim construction, a limitation that it could not have obtained in the first place. Rather, this Court should hold that section 112(6) applies to the "interrupt control means . . . for issuing . . ." limitation. This Court should also reject PACid's efforts to circumvent the quid pro quo of section 112(6). Because the '646 patent fails to disclose sufficient, definite structure that corresponds to the "interrupt control means . . . for issuing an interrupt signal upon receipt of said command sequences," Defendants ask this Court to grant their motion for summary judgment.

I. SECTION 112(6) APPLIES TO THE “INTERRUPT CONTROL MEANS . . . FOR ISSUING” LIMITATION

PACid does not dispute that the “interrupt control means . . . for issuing an interrupt signal upon receipt of said command sequences” is presumptively within section 112(6). (PACid Resp. (Doc. No. 271) at 8); see also Net MoneyIN, Inc. v. VeriSign, Inc., 545 F.3d 1359, 1366 (Fed. Cir. 2008) (describing the presumption). PACid failed to rebut this presumption because it cannot identify sufficient structure in the claim limitation that performs the claimed function entirely, as required. See Envirco Corp. v. Clestra Cleanroom, Inc., 209 F.3d 1360, 1364 (Fed. Cir. 2000) (“That presumption fails . . . if the claim itself recites sufficient structure to perform the claimed function.”); see also Altiris, Inc. v. Symantec Corp., 318 F.3d 1363, 1376 (Fed. Cir. 2003) (“Although ‘commands’ represent structure (in the form of software), it is not sufficient structure to perform the entirety of the function.”).¹ Indeed, in its opposition brief on this issue, PACid identifies no structure whatsoever in the limitation that performs the claimed function.

A. PACid Cannot Rebut the Presumption that Section 112(6) Applies Because “Interrupt Control” Is Not a Structure

To determine whether a claim element recites sufficient structure to avoid section 112(6), courts examine whether claim terms have “a generally understood structural meaning in the art.” Mas-Hamilton, 156 F.3d at 1213-14. In this inquiry, “it is appropriate to look to dictionaries ‘to determine if a disputed term has achieved recognition as a noun denoting structure.’” Mass. Institute of Tech. & Elecs. for Imaging, Inc. v. Abacus Software, Inc., 462 F.3d 1344, 1354 n.5 (Fed. Cir. 2006) (internal citations omitted).

When a term modifies “means” (or a synonym like “mechanism” or “device”), courts

¹ PACid appears to believe (incorrectly) that the inventors’ intent to invoke section 112(6) is relevant to rebutting the presumption. (PACid Resp. (Doc. No. 271) at 8.) The only way to rebut the presumption is to identify sufficient structure in the limitation itself. Net MoneyIN, 545 F.3d at 1366. Once the inventor uses the “means for . . .” paradigm, his “intent” for using the words that invoke the presumption is irrelevant.

examine whether the modifier itself is known to connote “sufficient structure to a person of ordinary skill in the art.” See, e.g., id. at 1354 (determining that “color selection mechanism” lacks sufficient structure to avoid section 112(6) treatment because “color selection” is “not defined in the specification and has no dictionary definition and there is no suggestion that it has a generally understood meaning in the art”); Envirco, 209 F.3d at 1365 (holding section 112(6) does not apply to “second baffle means” because the word “baffle” itself imparts structure and the claim further recites the structure of the baffle).²

Here, PACid has failed to show that “interrupt control” is the name of a known structure that performs the entirety of the function of “issuing an interrupt signal upon receipt of said command sequences.” Although PACid claims that one of ordinary skill in the art would know that the words “interrupt control” reference structure, PACid has not identified any dictionary that defines “interrupt control.” Also, PACid has not found any text book that illustrates the term “interrupt control” has a generally understood structural meaning in the art. If the term “interrupt control” were known in the art to reference structure when the ’646 patent’s application was filed, then a reputable dictionary or text book in that 1997 time-frame would have defined this term as a definite structure. The complete lack of such evidence in the record is powerful proof that “interrupt control” does not have a generally understood structural meaning in the art.

PACid offers a declaration of a consultant, retained six days before PACid filed its opposition brief,³ to assert that “interrupt control” is a structure. However, when this consultant

² Note, however, that a structural modifier may not always overcome the presumption. See, e.g., Unidynamics Corp. v. Automatic Prod. Int’l, 157 F.3d 1311, 1319 (Fed. Cir. 1998) (holding section 112(6) applies to “spring means”), abrogated on other grounds by Egyptian Goddess, Inc. v. Swisa, Inc., 543 F.3d 665 (Fed. Cir. 2008).

³ (Ex. E, Cantrell Dep. Tr. at 13:16-22.) This consultant does not meet the correct definition of one of ordinary skill in the art, see SOF ¶7, because he has no meaningful industrial experience in the design of digital systems and their interface with computer systems. (See, e.g., id. at 12:8-15:23, 23:8-25:18, 64:4-8.) Even more troubling is the inconsistency in his opinion about whether he meets his own definition of one of ordinary skill in the art. He candidly admitted that he did not meet that definition due to his inexperience in electronic systems design before

first examined the patent, he stated that “[Defendants’ Expert, Dr.] Mercer is correct in asserting that interrupt control is a function . . .” (Ex. F, 3/8/10 email (emphasis added).)⁴ Even today, this consultant continues to believe that “interrupt control” refers to a function in some contexts. (Ex. E, Cantrell Dep. Tr. at 104:13-16, 111:20-112:6.)

Although PACid’s consultant conveniently opines that the ’646 patent uses “interrupt control” to refer to a structure, he admits that no document from his search uses the term “interrupt control” to refer to a structure instead of a function. (See, e.g., id. at 117:14-118:4.) Specifically, this consultant located five sources (e.g., technical specifications), which he cites to support his assertion that “the words ‘interrupt control’ . . . are understood by those of ordinary skill in the art to refer to structure.” (Doc. No. 271-1 at ¶ 5 (citing Exs. 5-9); Ex. E, Cantrell Dep. Tr. at 41:10-22, 118:12-121:11.) None of these documents even uses the term “interrupt control.” (Ex. E, Cantrell Dep. Tr. at 41:10-22, 118:12-121:6; Doc. Nos. 271-6 to 271-7 (Ex. 5); Doc. No. 271-8 (Ex. 6); Doc. No. 271-9 (Ex. 7); Doc. No. 276-1 (Corrected Ex. 9).)⁵

Further, although PACid’s counsel also provided its consultant with two Motorola documents that contain the words “interrupt control,”⁶ this term appears in only a functional block diagram of a microcontroller. (See Doc. No. 271-5 (Ex. 4, C-3 to Cantrell Decl.) at Figure 1; id. (Ex. 4, C-4 to Cantrell Decl.) at PAC0000713; id. at 158:1-4 (calling another “block

being asked this question again on redirect (after having discussed it with PACid’s counsel during a break). (Id. at 17:11-14, 63:22-64:8, 207:22-25, 212:8-23.)

⁴ This consultant also believed that the interrupt control means limitation was “plausibly means-plus-function.” (Ex. F, 3/8/10 email). Today, after being retained and working with PACid’s counsel, he believes otherwise. (Ex. E, Cantrell Dep. Tr. at 103:21-106:11.)

⁵ When referring to a component that generates interrupts, some of these documents use the word “interrupt controller.” (Ex. E, Cantrell Dep. Tr. at 117:14-21.) At most, therefore, these documents are relevant to PACid’s consultant’s assertion that the word “interrupt controller” has a structural meaning. Because neither claim 12 nor any other part of the ’646 patent uses the term “interrupt controller,” these documents are entirely irrelevant to the issues at hand—whether the “interrupt control means . . . for issuing . . .” limitation falls within section 112(6) and whether this limitation is indefinite. PACid’s consultant admitted, furthermore, that “interrupt controller” and “interrupt control” do not mean the same thing, (id. at 170:16-171:1), and that he has no evidence that people of skill in the art use these two terms interchangeably, (id. at 128:25-129:5.)

⁶ (Ex. E, Cantrell Dep. Tr. at 41:10-22.)

diagram” a “functional block diagram”).⁷) Because the term “interrupt control” does not appear in the text of the documents, the documents do not provide any context that would indicate that “interrupt control” refers to a structure rather than a function. Given that even PACid’s consultant agrees that “interrupt control” refers to function in some contexts, the sole ambiguous use of the term in the Motorola documents is not enough to show that “interrupt control” is a structural term to overcome the presumption that section 112(6) applies.⁸

B. Defendants Have Not Admitted That “Interrupt Control” Is Structure

Because claim 12 refers to “said interrupt control” and not “said interrupt control means,” the “said interrupt control” limitation lacks antecedent basis. Defendants’ decision, however, not to argue that this flaw renders claim 12 indefinite does not support PACid’s claim that “interrupt control” is structure.

Defendants did not waste this Court’s time with the lack of antecedent basis issue because courts can correct such a typographical error when the error is readily apparent on the face of the patent. Hoffer v. Microsoft Corp., 405 F.3d 1326, 1331 (Fed. Cir. 2005) (“When a harmless error in a patent is not subject to reasonable debate, it can be corrected by the court.”); Novo Indus., L.P. v. Micro Molds Corp., 350 F.3d 1348, 1354-55 (Fed. Cir. 2003). If the “nature of the error is[] apparent from the face of the patent” and there is only one plausible correction to the claim, a court has the power to correct the claim to save it from invalidity. Id.

Here, an obvious way to correct the error is to insert “means” after “said interrupt control.”⁹ PACid appears to suggest, however, that the error in the claim is the use of the word

⁷ See In Re Ghiron, 442 F.2d 985, 991 (C.C.P.A. 1971) (defining a “block diagram” as “a group of rectangles representing the elements of the system, functionally labeled and interconnected by lines”).

⁸ As explained in the opening brief, Dr. Mercer opined that this lone mention of “interrupt control” in the block diagrams refer to a function and not a structure. (Doc. 164-4, Mercer Dec. at ¶ 14.)

⁹ Even if the claim were not corrected, missing antecedent basis does not automatically render a claim indefinite. See Energizer Holdings, Inc. v. Int’l Trade Comm’n, 435 F.3d 1366, 1370-71 (Fed. Cir. 2006) (“[D]espite the absence of explicit antecedent basis, if the scope of a claim would be reasonably ascertainable by those skilled in the

“means” in the “interrupt control means” limitation. (PACid Resp. (Doc. No. 271) at 8-9). If PACid contends that the word “means” in the claim is a mistake, this Court cannot correct the claim for two reasons. First, this mistake is not clear on its face; rather, the claim uses the quintessential means-plus-function format for this limitation. Second, in light of PACid’s suggestion that “means” should not appear at all, PACid’s own arguments suggest that there are at two ways to correct the claim. When there is more than one way to correct a claim, it is not “within the ambit of the district court’s authority” to make any correction at all. Novo Indus., 350 F.3d at 1357. Therefore, this Court should reject PACid’s invitation to discount the presumption that section 112(6) applies.

II. PACID HAS NOT PAID THE PRICE FOR INVOKING SECTION 112(6)

PACid admits that if this Court finds that section 112(6) governs the “interrupt control means . . . for issuing . . .” limitation, “[t]he only question remaining is whether the ‘interrupt control unit’ is structure. (PACid Resp. (Doc. No. 271) at 10.) Notably, PACid does not assert, even in the alternative, that the corresponding structure for the “interrupt control means . . . for issuing . . .” limitation is whatever structure is inside the Motorola MC68HC05SC28 part. (*Id.*)

A. The Black Box “Interrupt Control Unit” Is Insufficient Structure

As a matter of law, disclosing a functional black box without description of any structures inside that black box that supposedly perform a claimed function does not satisfy the definiteness requirements for a section 112(6) limitation. See Biomedino, LLC v. Waters Techs., 490 F.3d 946, 953 (Fed. Cir. 2007). Like the “control” box in Biomedino,¹⁰ the “interrupt control unit” is insufficient structure because the ’646 patent does not disclose structures inside

art, then the claim is not indefinite.” (internal quotations and citations omitted)). For this additional reason, Defendants’ decision not to challenge the definiteness of “said interrupt control” does not show that “interrupt control” refers to structure.

¹⁰ Tellingly, PACid does not even attempt to distinguish the Biomedino case in its brief, which is squarely on point.

the “interrupt control unit” or its operation.

Although PACid mentions the various electrical connections of the “interrupt control unit” within the system of Figure 3, it identifies no components that actually issue interrupt signals over those electrical connections. (PACid Resp. (Doc. No. 271) at 10-11.) The closest that PACid comes to identifying anything specific about the “interrupt control unit” is to posit that this unit “include[s] hardware” or “hardware circuitry,” without identifying any aspect of this hardware or its operations. (*Id.* at 11.) Everything physical is “hardware,” however. PACid cannot meet the standard for definiteness merely by characterizing a function as nondescript “hardware” or including such “hardware.”¹¹ Notably, the ’646 patent itself never calls the “interrupt control unit” “hardware,” or states that it contains “hardware circuitry.”

Although PACid attempts to supplement the ’646 patent’s deficient disclosure with extrinsic evidence, this tactic is improper. See Atmel Corp. v. Information Storage Devices, Inc., 198 F.3d 1374, 1381 (Fed. Cir. 1999) (holding that, for a limitation to be definite, the corresponding structure must be present in the specification itself and not an external source). The ’646 patent does not mention any of the interrupt controllers that PACid says were commercially available at the relevant time. Furthermore, the alleged detail in the Motorola documents is not included in the ’646 patent’s specification.¹² PACid’s consultant admitted that the most important details—the actual structure and way that part number MC65HC05SC28 allegedly issues interrupt signals upon receipt of command sequences—does not appear in the Motorola documents and he would not expect this information to be disclosed publicly. (Ex. E,

¹¹ Therefore, Dr. Mercer’s testimony that “there is some hardware inside that box” does not support PACid’s position. Dr. Mercer was clear that the patent does not disclose any details about whatever hardware was inside that black box. (Doc. 271-13, Mercer Depo. at 98:20-21).

¹² PACid’s consultant also admitted that the “INTFF flip-flop” and “interrupt request latch” do not perform the claimed function of “issuing an interrupt signals upon receipt of command sequences” in its entirety. (Ex. E, Cantrell Dep. Tr. at 195:1-12.) Therefore, even if the ’646 patent had disclosed these components, the patent would still lack sufficient structure. Altiris, 318 F.3d at 1376.

Cantrell Dep. Tr. at 94:25-95:24, 134:7-13.)

Because the '646 patent itself does not disclose the structures inside the "interrupt control unit" or its operation, the patent contains much less detail than the disclosure in Intel Corp. v. Via Technologies, Inc., 319 F.3d 1357 (Fed. Cir. 2003). The Intel/Via case pertains to a patent that disclosed a precise algorithm to perform the recited function. Id. at 1365; see also Aristocrat Techs. Australia Pty Ltd. v. Int'l Game Tech., 521 F.3d 1328, 1337 (Fed. Cir. 2008) (characterizing the Intel/Via case as one involving implementation of a disclosed algorithm). Specifically, the claim in that case recited the functions of "selectively writ[ing] data directly to said peripheral device" and "determin[ing] whether data is able to be written directly to said peripheral device." The district court held that the corresponding structure was "the core logic of a computer adapted to perform Fast Write," which was a method disclosed in the patent, along with "the protocol used to perform Fast Write." Intel Corp., 319 F.3d at 1365.

The patent in the Intel/Via case disclosed great detail about the Fast Write algorithm including the protocols used. Id. In addition, the patent disclosed "three diagrams, 35 signal charts and a detailed written description explaining the [Fast Write] invention." Id. at 1366. In light of this detailed disclosure, which taught a precise way of performing the recited functions, the Federal Circuit held that the corresponding structure was "the core logic of a computer modified to perform Fast Write," and also described this structure as "the core logic, as described in the specification and adapted to write directly and to react to WBF#." Id. at 1366. The court emphasized that, because the patent disclosed that the core logic was "adapted to practice Fast Write pursuant to the specification," the claim at issue was "not indefinite merely because no specific circuitry is disclosed" or because multiple modifications were possible. Id.

In contrast, the '646 patent discloses nothing about the structure of the interrupt control

unit, or the way it works, including the way it allegedly issues interrupt signals upon receipt of command sequences. Thus, this case is aligned with Biomedino and far different from Intel/Via. The record evidence overwhelmingly shows that the black box “interrupt control unit” does not qualify as corresponding structure for the “interrupt control means for . . .” limitation.

B. “Interrupt Control Unit” Does Not Have a Well-Known Structural Meaning

Because the ’646 patent discloses only a functional black box without any details about its structure, contents, or operation, the only way that PACid can save claims 12 and 26 is if the term “interrupt control unit” has a well-known structural meaning in the art. See Mas-Hamilton, 156 F.3d at 1213-14. PACid has failed to produce any reliable evidence that “interrupt control unit” refers to known structure in the art.

Although PACid relies on its paid consultant’s conclusory statement that “the words . . . ‘interrupt control unit’ are understood by those of ordinary skill in the art to refer to structure,” (Doc. No. 271-1 (Cantrell Decl. at ¶ 5), PACid has submitted no documentary or objective evidence to support this assertion. None of the technical documents attached to the consultant’s declaration even uses the term “interrupt control unit.” (Ex. E, Cantrell Dep. Tr. at 126:4-12; Doc. No. 271-5 (Ex. 4, C-3); *id.* (Ex. 4, C-4); Doc. Nos. 271-6 to 271-7 (Ex. 5); Doc. No. 271-8 (Ex. 6); Doc. No. 271-9 (Ex. 7); Doc. No. 276-1 (Corrected Ex. 9). Furthermore, PACid has submitted no dictionaries that include the term “interrupt control unit.” The absence of such evidence shows that “interrupt control unit” is not the name of a known structure or even a family of structures. See MIT, 462 F.3d at 1354. Accordingly, the ’646 patent does not disclose adequate structure corresponding to the “interrupt control means . . . for issuing . . .” limitation.

C. Whether the ’646 Patent’s Disclosure Allows One Skilled in the Art To Implement the Interrupt Control Function Is Irrelevant to Indefiniteness

PACid repeatedly tries to distract this Court from the complete lack of corresponding

structure in the specification by focusing on issues of enablement. For example, In Re Ghiron does not address the use of functional block diagrams in the context of whether a section 112(6) limitation is indefinite. 442 F.2d 985, 991 (C.C.P.A. 1971). The Ghiron court did not address the issue of indefiniteness, but rather upheld a rejection based on lack of enablement. Id. at 991-92. Although the court explained that block diagrams may be acceptable to meet the test for enablement,¹³ it ultimately held that the block diagrams in that case were not sufficient. Id.

Whether a skilled artisan would know how to implement a system described in the patent is a question of enablement and not definiteness. Atmel, 198 F.3d at 1382; see also Biomedino, LLC v. Waters Techs., 490 F.3d 946, 953 (Fed. Cir. 2007) (“The inquiry [for definiteness of a section 112(6) limitation] is whether one skilled in the art would understand the specification itself to disclose a structure, not simply whether that person would be capable of implementing that structure.”) (emphasis added)); see also Martek Biosciences Corp. v. Nutrinova, Inc., 579 F.3d 1363, (“To meet the enablement requirement, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation.” (internal citations omitted)). Therefore, PACid’s emphasis on the ability of one of skill in the art to implement an “interrupt control means” in the overall system—either by purchasing the Motorola part number or another commercially available interrupt controller—is irrelevant to the present issue: whether one skilled in the art would understand the ’646 patent specification itself to disclose a structure that performs the claimed function in its entirety. See Biomedino, 490 F.3d at 953.

III. CONCLUSION

Defendants respectfully ask this Court to grant their motion for summary judgment.

¹³ “[F]unctional-type block diagrams may be acceptable and, in fact, preferable if they serve in conjunction with the rest of the specification to enable a person skilled in the art to make such a selection and practice the claimed invention with only a reasonable degree of routine experimentation.” 442 F.2d at 991 (emphasis added).

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM-ECF System per Local Rule CV-5(a)(3) on this 22nd day of March, 2010. Any other counsel of record will be served by first class mail on this same date.

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